

Water Conservation Program

Environmental Health
Programs
Division of Drinking Water

Background

The Department of Health (DOH) is the lead agency for developing water conservation, water demand forecasting, and water use data collection and reporting guidelines and requirements for public water systems in Washington State. These three elements are all addressed as part of a water conservation plan. DOH reviews the conservation plan as part of the water system plan submitted by water purveyors. DOH works in cooperation with the Department of Ecology (Ecology), other state agencies, water purveyors and other interested parties in developing the necessary policies and requirements for such water conservation planning.

DOH and Ecology have developed a memorandum of understanding detailing agency coordination on these programs. As part of this agreement, the water conservation program, water demand forecasts and water use data collection guidelines and requirements administered by DOH also meet the regulatory requirements of Ecology for the purposes of water right processing and administration. DOH and Ecology requirements for development of a water conservation plan are contained in the "Guidelines and Requirements for Public Water Systems Regarding Water Use Reporting, Demand Forecasting Methodology, and Conservation Programs" (Conservation Planning Requirements) published in March 1994. This document was developed based upon DOH authorities contained in RCW 43.20.230 and 246-290-100 WAC. Other authorities also exist in various other Ecology statutes.

Public Health Issues

Adequate water quantity and reliability are necessary to ensure that basic public health needs such as drinking, bathing and toilet flushing can be met on an uninterrupted basis. Adequate quantity is also necessary in order to assure that other unsafe (non-potable) water sources are not used in a manner that threatens public health. As water becomes more scarce and difficult to obtain, and competing demands for water increase, the same finite resource is going to have to go farther in order to meet the states continued population growth, expanding economy and natural resource (e.g. instream flows for fisheries) needs.

Water Conservation

Water conservation programs developed by purveyors help to increase the water use efficiency of water systems, and helps to allow for continued growth and expansion while minimizing impacts to our natural resources. The Seattle Water Department alone has saved 14 million gallons a day since 1990, and forecasts saving an additional 21 million gallons a day by 2005 through implementation of their conservation program.

Demand Forecasting

The water demand forecasting conducted by purveyors helps to ensure that future water demands are accurately identified, and that new sources are developed and on line when needed. Purveyors are required to begin to plan for new source development when their demand forecasts indicate that additional water rights or source capacity will be needed within 20 years. This demand forecasting helps to ensure that existing developed sources are not "over connected" such that adequate water quantity is not available to meet system needs.

Water Use Data Collection

Finally, the water use data collection program provides the “actual use data” necessary to accurately develop water demand forecasts and develop effective water conservation programs.

Water Shortage Response Plans

Purveyors are also strongly encouraged to develop water shortage response plans detailing actions that will be taken during various levels of water shortages. This includes development of a contingency plan that identifies procedures for making emergency water available to customers. Having a water shortage response plan will provide purveyors with an established plan on how to address shortages. It will also assist customers in understanding what they can do to reduce water usage and what to expect if the shortages become more severe. DOH guidelines on developing such water shortage response plans are available upon request.

Key Points

Water system plans are required of new or expanding public water systems. As part of these plans, systems are required to develop and implement water conservation plans. Water conservation plans include development and implementation of a water conservation program, development of water demand forecasts, and collection and reporting of water use data. Purveyors are also strongly encouraged to develop water shortage response plans as part of the water system plan.

- Water conservation plans reviewed and approved by DOH will meet the regulatory requirements of Ecology.
- The conservation planning requirements vary significantly based upon the size of the water system. The larger the system, the more detailed the information that is required.
- DOH provides technical assistance and guidance to public water systems regarding compliance with the Conservation Planning Requirements. This includes several technical assistance documents and brochures that can be distributed to purveyor customers.

What We are Doing

Amending 246-290 WAC to require development of a water shortage response plan as part of the water system plan.

- Developing a water use data management database, and initiating the collection and management of such water use data.
- Developing “source of supply” analysis requirements that expand the water conservation program elements that must be considered by systems needing additional water rights. This includes evaluation of artificial recharge, interties, wastewater reuse, and other innovative conservation/efficiency opportunities.
- Further developing, implementing and promoting the wastewater reuse program, and developing a greywater reuse program.

Providing ongoing technical assistance and direction to purveyors developing water conservation plans.

Conclusions

Efficient water use and accurate water demand forecasting are important components of overall water system management. They are also important to ensuring a healthy and growing economy, as well as a healthy natural environment. As new sources of water become more difficult to develop, conservation and efficiency improvements to existing developed sources will become increasingly important.

More Information

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